

Application No.10/601,927
Amendment dated April 7, 2005
Reply to Office Action of 12/29/2004

CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application.

LISTING OF CLAIMS:

1. (Currently amended) An airbag apparatus for a motorcycle for protecting a rider in the event of frontal collisions, the airbag apparatus comprising:
a retainer for the airbag mounted to a lower portion of a motorcycle;
an airbag for being deployed in a primarily upward, vertical direction
~~in predetermined directions relative to movement of the rider due to frontal collisions;~~ and

inflation control means spaced upwardly from the retainer for restricting inflation of the airbag in ~~one of the directions~~ in a predetermined direction that is generally aligned with the rider movement due to frontal collisions and allowing inflation of the airbag in ~~another of the directions that is~~ the upward vertical direction transverse to the ~~[[one]]~~ inflation direction aligned with the rider movement.

2. (Currently amended) The airbag apparatus of claim 1 wherein the inflation control means comprises tethering means for connecting generally opposing portions of the airbag so as to restrict airbag inflation in the ~~[[one]]~~ direction aligned with the rider movement.

3. (Currently amended) The airbag apparatus of claim 1 wherein the inflation control means includes at least one tether that is connected to the airbag at an inflated airbag portion adjacent to the rider and which generally extends away from the rider in the [[one]] direction aligned with the rider movement.

4. (Cancelled)

5. (Currently amended) The airbag apparatus of claim 1 wherein the airbag has a predetermined inflated volume, and
an inflator sized to inflate the predetermined airbag volume with the inflation control means optimizing the inflated airbag volume extending in the ~~transverse~~ upward direction for maximized rider protection while keeping the size of the inflator to a minimum.

6. (Original) The airbag apparatus of claim 1 wherein the airbag comprises a central panel and side panels, and the inflation control means comprises a connector attached to the central panel at one end and to either the central panel or the side panels at the opposite end thereof.

7. (Currently amended) The airbag apparatus of claim 1 wherein the inflation control means increases rigidity of the airbag in the [[one]] direction aligned

with the rider movement over rigidity of the airbag in the [[other]] upward direction.

8. (Original) The airbag apparatus of claim 1 wherein the inflation control means includes a tether in the airbag that extends generally in a fore and aft direction as the airbag is deployed.

9. (Currently amended) The airbag apparatus of claim 1 wherein the inflation control means includes a tether attached to the airbag at generally opposing forward and rearward portions therein so that upon airbag deployment and full inflation thereof a recess is formed in the airbag adjacent the rider.

10. (Original) The airbag apparatus of claim 1 wherein the inflation control means includes a tether or tethers that are connected at predetermined positions in the airbag including generally opposing forward and rearward positions.

11. (Original) The airbag apparatus of claim 10 wherein the rearward position is adjacent the rider and the forward position includes a pair of connections on either side of the airbag toward the forward side thereof.

12. (Original) The airbag apparatus of claim 10 wherein the predetermined positions includes a generally upper position.

13. (Currently amended) An airbag apparatus for a motorcycle having front and rear wheels and a seat for a rider spaced rearward of the front wheel, the airbag apparatus comprises:

a retainer;

an airbag for being deployed from the retainer forwardly of the seat in the event of frontal collisions;

at least one direction control member associated with the airbag to optimize airbag inflation in a predetermined, primary inflation direction; and

a plurality of connections between the control member and the airbag that are at predetermined positions on the airbag spaced from the retainer such that the control member and the connections to the airbag cause the predetermined inflation direction [[is]] to be transverse to generally forward movement of the rider caused by frontal collisions and to minimize time for airbag inflation in the primary inflation direction.

14. (Original) The airbag apparatus of claim 13 wherein the inflated airbag has a rear that is adjacent the rider and a front that is spaced forwardly therefrom, and the plurality of connections include connections that are generally disposed at the front and rear of the airbag to restrict size of the inflated airbag therebetween.

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15. (Original) The airbag apparatus of claim 14 wherein the front connection comprises a pair of laterally spaced connections that generally restrict the size of the inflated airbag in a lateral direction.

16. (Original) The airbag apparatus of claim 14 wherein the plurality of connections includes a generally upper connection beyond which the airbag extends when inflated.

17. (Currently amended) The airbag apparatus of claim 13 ~~including a~~ wherein the retainer ~~in which~~ has the airbag ~~[[is]]~~ stowed therein and is positioned to allow the airbag to inflate upwardly and forwardly and rearwardly, and the predetermined positions of the connections between the control member and the airbag cause the predetermined direction to be in a generally upward direction so that size of the inflated airbag is maximized in the upward direction and restricted in a forward and rearward direction.

18. (Original) The airbag apparatus of claim 17 wherein the predetermined positions of the connections restrict size of the inflated airbag in a lateral direction transverse to the upward direction and the forward and rearward direction.

19. (Currently amended) A method for manufacturing an airbag apparatus for a motorcycle, the method comprising:

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providing an airbag and a retainer therefor; [[and]]

connecting at least one direction control member to the airbag spaced from the retainer such that inflation of the airbag is optimized in a predetermined direction for maximizing protection of the rider in the event of front collisions with the motorcycle and so that the control member is not connected to the retainer with the airbag inflated.

20. (Original) The method of claim 19 wherein at least one direction control member is connected to the airbag by connecting generally opposing portions of the airbag with at least one tether so that the tether is extended with airbag inflation and the extended tether restricts inflation size of the airbag between the generally opposing portions.